

an anode chamber and a cathode chamber;

a coalescing surface for coalescing a gas from said effluent, wherein coalesced gas is collected within said first chamber; and

an outlet, wherein collected gaseous effluent is vented via said outlet to transport a fluid.

25. (new) The self-driven pump according to claim 24, wherein the fluid comprises effluent.
26. (new) The pump according to claim 24, wherein fluid is transported proportionately with respect to the amount of gaseous effluent collected.

REMARKS

The application has been reviewed in light of the outstanding Action. Claims 1-24 are pending with claims 1-3, 16, 18, 21 and 24 being independent. Claims 1-5, 7-10, 14 and 16-18 have been amended, and claims 19-26 are newly presented. Support for the new claims can be found on page 4, lines 17-24, page 7, lines 13-28, and Figs. 3A-3E. The specification and drawings have been amended to address informalities noted at the bottom of page 3 of the Action. Each of the points raised in the outstanding Action are addressed below.

Allowable Claims

Applicants wish to thank the Examiner for allowing claim 18 and for indicating that dependent claims 4-10, 13-15 and 17, would be allowable if amended to incorporate the features of their base independent claims. Although most of these claims have been

amended by the present Response, Applicants respectfully submit that these claims are still patentable over the prior art.

Objection To The Specification

The specification was objected to for various informalities noted on page 3 of the Action. Accordingly, Applicants submit with the present response a Request For Approval of Drawing Changes which addresses the drawing informalities noted in the Action for Fig. 4. Applicants have also amended the specification to address the informality regarding numeral 2 used in the specification, by deleting that numeral from the specification, the informality in the background section of the specification, page 4, line 8 ("Fig. 3" should read --Fig. 2--), and the information regarding the description of Fig. 4 on page 8 of the specification. Applicants respectfully submit that no new matter has been added.

Rejection of Claims 1-2 Under 35 U.S.C. §102

Claims 1 and 2 were rejected under §102 as reciting subject matter allegedly anticipated by either U.S. patent 3,580,163 (Farrell Jr.) or U.S. patent 6,051,266 (Totsuka). For the following reasons, Applicants submit that the claimed invention is patentable over the prior art.

The Invention

Amended independent claim 1 is directed to a fuel cell coalescing surface and includes a vaulted wall having a domed shape which collects effluent gases from at least one of an anode chamber and a cathode chamber of a fuel cell. Independent claim 2 recites similar patentable features.

This feature enables the collection of a gas from an effluent flow so that a separate gas separator device can be eliminated from a fuel cell system thereby making the overall cost of the fuel cell system less expensive, as well as enabling the use of such gases to move fluids in the fuel cell system (see specification page 4, was 11-24). The coalescing surface represents an advancement in gas separation devices over the prior art method of using gas separation membranes, for example.

The Cited Prior Art

As understood by Applicants, Farrell Jr. is directed to a variable capacity coffee percolator. A downwardly facing deflector surface 19, directs upwardly pumped hot brewed liquid downwardly onto ground coffee beans. As also understood by Applicants, Totsuka is directed to an apparatus for roasting coffee beans and includes a cover 30 for directed hot air out of a roast pan 10.

Analysis

In order for a claim to be anticipated by the prior art, each and every element as set forth in the claim must be described, either expressly or inherently in a single prior art reference. M.P.E.P. 2131, citing, Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).

Accordingly, Applicants could find nothing in Farrell Jr., or Totsuka, which discloses a fuel cell coalescing surface of a vaulted wall having a domed shape for collecting effluent gases from at least one of an anode chamber and a cathode chamber of a fuel cell. The deflector surface of Farrell Jr. does not collect effluent gases (or any gases for that matter) from an effluent of an anode chamber and/or a cathode chamber of fuel cell, but rather deflects hot water pumped up from the bottom of a coffee percolator. Applicants respectfully submit that the cover in Totsuka does not collect effluent gases

from an anode chamber and/or a cathode chamber of a fuel cell, but instead is used to direct hot air out from a pan which roasts coffee beans.

Since both Farrel Jr. and Totsuka each fail to disclose at least one of the features recited in claims 1 and 2, and since the remainder of the prior art of record fails to meet the deficiencies of Farrel Jr. and Totsuka in this regard, the claims are patentable over the prior art. Moreover, Applicants respectfully submit, but will not address this concern here, that these references are non-analogous art and thus should not be cited as prior art in the presently claimed invention. Accordingly, Applicants respectfully request that the § 102 rejection be withdrawn.

Rejection of Claim 3, 11, 12 and 16 Under §102

Claims 3, 11, 12 and 16 were also rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent 5,795,496 (Yen et al.). Applicants submit that the invention recited in claims 3 and 16 are patentable over the prior art for the following reasons.

The Invention

Amended independent claim 3 is directed to a fuel cell system including a housing defining an anode chamber and a cathode chamber and including a catalyst, a protonically conductive but substantially electronically non-conductive membrane positioned between the anode chamber and the cathode chamber. The fuel cell system also includes a conduit in communication with at least one of the anode chamber and the cathode chamber for directing effluent from at least one of the anode chamber and the cathode chamber. The fuel cell system further includes a coalescing surface for collecting effluent gas from the effluent received from at least one of the anode chamber and the cathode chamber via the conduit. Amended independent method claim 16, as well as new independent claims 21 and 24, recite similar patentable features.

The Cited Prior Art

As understood by Applicants, Yen et al. is directed to a polymer material for electrolytic membranes in fuel cells. Carbon dioxide formed in the anode compartment is vented through a port 24 within methanol tank 19.

Analysis

Applicants could find nothing in Yen et al. that discloses, or teaches or suggests for that matter, a coalescing surface for collecting effluent gas. The Action indicates that reference numeral 24 is a coalescing surface. However, the specification refers to item 24 as an outlet – and nothing more. There is nothing in the disclosure of Yen et al. that expressly or inherently implies that port 24 could be a coalescing surface – it is an outlet to vent gas from the methanol tank. It is difficult for the Applicant to understand how the present Action can conclude that the outlet is a coalescing surface.

Since the remainder of the art of record fails to meet the deficiencies of Yen et al., Applicants submit that the invention recited in claims 3, 16, 21 and 24 are patentable over the prior art. Moreover, the remainder of the claims are patentable for the same reasons since all depend on one or another of the independent claims.

CONCLUSION

In view of the foregoing remarks, Applicants submit that the issues raised in the outstanding Office Action have all been addressed. Accordingly, Applicants respectfully request favorable reconsideration and early passage to issue of the present application. Applicants respectfully request that should the Examiner have additional concerns and reasons for not allowing all the claims of the subject application, that the Examiner contact Applicants' undersigned attorney to discuss any remaining concerns.

No fees are believed due in the present response. However, in the event that it is determined that additional fees are due, however, the Commissioner is hereby authorized to charge Deposit Account No. 50-0311, referencing the attorney docket number of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 935-3000. All correspondence should be directed to our New York office address, which is given below.

Respectfully submitted,

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